MEMORANDUM

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO: Peter Lynch

FROM: George Klepp through Frank Markewicz and Haig Kasabach

SUBJECT: L. E. Carpenter Facility Ground-Water Plans DATE: May 17, 1979

As per my memo to Haig Kasabach, I am presenting the steps that should be taken to alleviate the potential ground-water pollution of a valuable aquifer. Since there are four public water supply wells immediately down-stream from the L. E. Carpenter site these steps should be undertaken as soon as possible.

1) Samples should be taken from the public water supply wells once a month and analysed for organic chemicals.

2) The composition of the sludge material in the lagoon should be determined and the material excavated out and removed from the site to a treatment facility or secure landfill.

3) The buried drums on the site must be located and removed to a safe landfill and the earth around the drums should also be removed if the integrety of the drum is in doubt.

4) All of the tanks on the site should be emptied and pressure tested to determine the integrity of the tanks.

5) Where drums are stored on the surface, proper precautions must be taken that any leakage from the drums does not enter exposed ground. The best course for the storage of these drums would be a secure, concrete lined structure.

6) The areas around the tanks and other places where there is evidence of spillage be analysed for hazardous substances. If there is evidence of toxic materials in the soil samples, that soil should be removed to a secure landfill.

7) The material that is discharged into the Rockaway River from the cooling system of the plant should be analysed for toxic substances. If contamination is evident then material must not enter the River's water, but collected and treated.

8) The surface water run-off discharge pipe must be blocked to prevent the water from entering the River. Since the conditions on the site are so horrendous, it may be expected that this water is contaminated. The "pillow" collector cannot be considered a valid treatment process. This water should also be collected and either treated or removed to a secure facility.

9) The discharge pipe of unknown origin or function must be traced and material that enters the pipe analysed. If, as in the other cases, the material shows contamination, it too must be collected and treated.

As evident from these first steps that must be taken, it is necessary to remove the sources of additional pollution before reasonable measures can be undertaken to clean-up the ground water. While the clean-up of the ground water may proceed simultaneously with the surface clean-up, it would be foolish to think that these steps would provide permanent guaranty of ground-water quality unless the facility is maintained properly.

Initial ground-water investigation must begin with a series of monitor wells installed at locations throughout the facility to determine the movement of the ground water under the site. The exact locations of these wells will be determined on the site as drilling progresses in order to make the most effective use of each well. A tentative location map for these wells is indicated on the attached site plan. These wells should include at least:

- Five(5) two(2) inch PVC observation wells,

- Three(3) four(4) inch PVC observation wells which may later be used in the recovery system.

Of these eight (8) wells to be installed on the site, three (3) should be drilled to bed rock in order to determine the thickness of the saturated zone. Drilling to bed rock will be concluded if a substantial impervious zone (clay layer) is encountered. These wells will be terminated at the imperveous boundary and screened at least ten (10) feet above the zone.

The other wells will be to various depths, based on field decisions, to determine whether there is a zonation of the pollution. The ground-water samples will be analysed for contamination by toxic substances.

A meeting with Mr. Henry Jarrett, Chief Engineer for L. E. Carpenter, has been set up for May 21 or 22 to discuss the installation of these wells. Mr. Jarrett has indicated that Carpenter is ready to begin as soon as possible to remedy the existing situation.

Once determination of the type and extent of the pollution has been made, further plans will be formulated as to the clean-up of the aquifer and conferences held with Mr. Jarret.

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